* * 1	* *	* * *	* * 1	* * Welcome to STN International * * * * * * * * *			
NEWS	3 1			Web Page URLs for STN Seminar Schedule - N. America			
NEWS	3 2			"Ask CAS" for self-help around the clock			
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				resulting in a closer connection to BARS			
NEWS	4	AUG	02	IFIPAT/IFIUDB/IFICDB reloaded with new search and display			
•				116108			
NEWS	5	AUG	02	Pade and on patent records enhanced with European and Japan			
				ratent Office Classifications			
NEWS	6	AUG	02	The Analysis Edition of STN Express with Discover!			
MERIC	_			(version 7.01 for Windows) now available			
NEWS NEWS	-			BIOCOMMERCE: Changes and enhancements to content coverage			
MEMS	8	AUG	27	BIOTECHABS/BIOTECHDS: Two new display fields added for level			
NEWS	0	SEP	0.1	status data from inpadoc			
NEWS	-			INPADOC: New family current-awareness alert (SDI) available			
112112	+0	DEF	01	New pricing for the Save Answers for SciFinder Wigard within			
NEWS	11	SEP	0.1	STN Express with Discover!			
NEWS		-,		New display format, HITSTR, available in WPIDS/WPINDEX/WPIX			
NEWS	13			STANDARDS will no longer be available on STN SWETSCAN will no longer be available on STN			
NEWS				KOREAPAT now available on STN			
NEWS	EXP	RESS	OC'	TOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT			
			MAIM	INTOSH VERSION IS V6.0c(ENG) AND V6 0.Tc(JP)			
			ANL	CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004			
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NEWS INTER		General Internet Information					
NEWS LOGIN		Welcome Banner and News Items					
NEWS PHONE NEWS WWW		Direct Dial and Telecommunication Network Access to STN					
MEMP	AA MAM		CAS	World Wide Web Site (general information)			

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FILE COVERS 1907 - 29 Oct 2004 VOL 141 ISS 19 FILE LAST UPDATED: 28 Oct 2004 (20041028/ED)

FAN.CNT 10

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s fuel and (vitamin e or tocopherol)
          340874 FUEL
          154939 FUELS
          389767 FUEL
                   (FUEL OR FUELS)
          176528 VITAMIN
           49415 VITAMINS
          195026 VITAMIN
                   (VITAMIN OR VITAMINS)
         1802584 E
           28667 VITAMIN E
                   (VITAMIN(W)E)
           27205 TOCOPHEROL
           8044 TOCOPHEROLS
          29454 TOCOPHEROL
                   (TOCOPHEROL OR TOCOPHEROLS)
             45 FUEL AND (VITAMIN E OR TOCOPHEROL)
 => s l1 and carotene
          27960 CAROTENE
          20157 CAROTENES
          38399 CAROTENE
                  (CAROTENE OR CAROTENES)
 1.2
              2 L1 AND CAROTENE
 => d 12 1-2 all
     ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
 L_2
Full Text
     2003:334695 CAPLUS
     138:336957
     Entered STN: 02 May 2003
     Corn oil processing and products comprising corn oil and corn meal
     obtained from corn
     Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.;
IN
     Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.;
     Patist, Alexander
     Renessen, LLC, USA
PA
     U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836.
     CODEN: USXXCO
DT
     Patent
LA
     English
    ICM C11C001-00
     ICS A21D002-00
NCL 554010000; 554020000; 426622000
    17-9 (Food and Feed Chemistry)
    Section cross-reference(s): 18, 45, 51, 62
```

	PATENT NO		KIND	DATE	APPLICATION NO.	DATE		
PI			 A1	20030501	TIG. 0000			
	US 661086		B2	20030826	US 2002-47725	20020115		
	US 200219	3617	A1	20021219	US 2001-927836	202122		
	US 664893		B2	20031118	22 2001 327030	20010810		
DD	US 200322		A1	20031204	US 2003-368521	20030218		
PR	AI US 2000-6:		A2	20000810				
	US 2001-92 US 1999-24		A2	20010810				
	US 2002-47		A2 A2	19990211 20020115				
CL	ASS		112	20020115				
P.	ATENT NO.	CLASS	PATENT	FAMILY CLASS	SIFICATION CODES			
U	S 2003083512	ICM	C11C001	- <b></b>				
		ICS	A21D002					
110	2 2002002512	NCL	5540100	554010000; 554020000; 426622000				
0.5	3 2003083512	ECLA	A23D009,	A23D009/00; A23K001/18K; A23K001/18L2: A23K001/10M.				
			A23K001/18S; A23L001/10M; A23L001/105B; A23L001/30C; C08B030/10; C08L099/00; C11B001/04; C11B001/10;					
			C11B0030	/10; C08L099	/00; C11B001/04; C11B	001/10;		
			A23K001/	14: A23K001	7/06; A23D009/007; A2 /16G; A23K001/16L; A2	3K001/00B2;		
US	2002193617	ECLA	A23D009/	'00; C11B001	/10; C11B003/00B; C12	3KUU1/18		
			A23D009/	7007; A23J00	1/14C2; A23K001/00B2.	A23K001/04.		
			AZ3KIIU/	; A23K001/1	OC; A23K001/14: A23K00	01/160.		
			A23K001/	16L; A23K00	1/18; A23K001/18K: A23	3K001/10to.		
				A23KUU1/18N; A23KU01/18S; A23L001/10M, A23L001/20G				
				B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06				
US	2003224496	ecla	A23D009/00; A23D009/007; A23J001/14C2; A23K001/00B2;					
			A23K001/04; A23K001/10; A23K001/10C; A23K001/14, A22K					
				A23K001/16L; A23K001/18; A23K001/18K, A23K001/1012				
			HZ3KUUI/	18N; A23K001	ב\dagger 18S; A23L001/10M. ב	31.001 /105		
			AZSLUUI/.	3UC; B02B00]	./00: C08B030/10. Cnot	.000/00.		
AB	Corn oil an	d corn			06; C11B001/10; C11B0 orn are included in us	03/00B; C12P		
	Process dell	Crarry 1	includes t	The stens of	aradking	The corn grain		
	is useful f	or makin	g enhance	ed animal fo	hem. products. The end rations, snack food	xtd. corn meal		
	produc	CD, COSII	ecics, an	la rermn, hr	oth additive	1, blended		
ST	corn mear of	ı⊥ manuf	feed foo	d fuel cosm	etic			
IT	Fats and Gly	yceridic	oils, bi	ological st	udies			
	(animal.	od or fe	ed use);	BIOL (Biolog	gical study); USES (Us	ses)		
	meal obta	COIN OI	<ul> <li>brocess</li> </ul>	ing and pro	ducts comprising corn	oil and corn		
ΙT	Food		Om COIII)					
(bars; corn oil processing and products comprising gorn oil and						1 and		
						.1 and corn		
IT Diesel fuel substitutes								
	(Diodiese	t; corn	oil proce	essing and p	roducts comprising co	rn oil and		
IT	corn meal Oryza sativa	ODCALIE	ea from co	orn)				
(bran; corn oil processing and products comprising corn oil and meal obtained from corn)						1 and corn		
IT	Bakery produ	cts	/					
Triticum aestivum								
	(byproduc	ts; corn	oil proc	oil processing and products comprising corn oil and				
	corn meal	optaine	a from co	rn)	_	<del>-</del>		

```
IT
       Solvent extraction
           (continuous; corn oil processing and products comprising corn oil and
           corn meal obtained from corn)
  IT
       Food viscosity
           (controls for; corn oil processing and products comprising corn oil and
           corn meal obtained from corn)
  ΙT
       Glutens
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn meal; corn oil processing and products comprising corn oil and
          corn meal obtained from corn)
  IT
       Acidity
       Air
       Antioxidants
       Biodegradable materials
       Bleaching
       Bread
       Breakfast cereal
       Canola
       Cottonseed
      Crosslinking agents
      Deodorization
      Dietary fiber
      Feed additives
      Feeding experiment
      Food additives
      Food processing
      Gallus domesticus
      Glycine max
      Helianthus annuus
      Herb
      Hordeum vulgare
      Micelles
      Nutrients
      Pigments, biological
      Rapeseed
      Rapeseed
      Solanum tuberosum
      Sorghum bicolor
      Spices
      Thickening agents
     Vinegar
     Zea mays
         (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
ΙT
     Aldehydes, biological studies
     Anhydrides
     Epoxides
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
     Amino acids, biological studies
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
IΤ
    Canola oil
    RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn oil and corn meal
       obtained from corn)
    Carotenes, biological studies
    RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
       (corn oil processing and products comprising corn oil and corn meal
```

```
obtained from corn)
       Enzymes, biological studies
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
          obtained from corn)
  IT
       Fats and Glyceridic oils, biological studies
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
          obtained from corn)
       Lipids, biological studies
  IT
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
          obtained from corn)
      Mineral elements, biological studies
  TΤ
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
          obtained from corn)
      Olive oil
 IT
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
         obtained from corn)
 IΤ
      Palm oil
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn oil and corn meal
         obtained from corn)
 TТ
      Proteins
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn oil and corn meal
         obtained from corn)
      Safflower oil
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn oil and corn meal
         obtained from corn)
 IT
      Soybean oil
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn oil and corn meal
         obtained from corn)
IT
      Sterols
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
IT
     Sunflower oil
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
IT
     Tocopherols
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
IT
     Vitamins
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn oil and corn meal
        obtained from corn)
TT
     Corn oil
    RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological
```

Flours and Meals

obtained from corn)

study); PREP (Preparation); USES (Uses)

(corn; corn oil processing and products comprising corn oil and corn meal obtained from corn)

(corn oil processing and products comprising corn oil and corn meal

IT Bos taurus

IT

(dairy cattle; corn oil processing and products comprising corn oil and corn meal obtained from corn) IΤ RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (fat-sol.; corn oil processing and products comprising corn oil and corn meal obtained from corn) TΤ Flours and Meals (feather meal; corn oil processing and products comprising corn oil and corn meal obtained from corn) Aquaculture Bos taurus Equus caballus Poultry Sus scrofa domestica (feed for; corn oil processing and products comprising corn oil and corn meal obtained from corn) TΤ Tilapia (feeding; corn oil processing and products comprising corn oil and corn meal obtained from corn) ΙT (flour and meal; corn oil processing and products comprising corn oil and corn meal obtained from corn) (for food; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Oryza sativa (hulls; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Beverages (low calorie; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Feather (meal; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Bone meal Meat (meat-and-bone meal; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Triticum aestivum (middlings; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Cooking (oils for; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Seed (oilseed, meal; corn oil processing and products comprising corn oil and corn meal obtained from corn) IΤ Flours and Meals (oilseed; corn oil processing and products comprising corn oil and corn meal obtained from corn) Fats and Glyceridic oils, biological studies Fats and Glyceridic oils, biological studies RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses) (partially hydrogenated; corn oil processing and products comprising corn oil and corn meal obtained from corn) TТ (pet; corn oil processing and products comprising corn oil and corn meal obtained from corn) IT Food (porridge; corn oil processing and products comprising corn oil and

corn meal obtained from corn)

IT Bran

> (rice; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT

(snack; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Beverages

(sports; corn oil processing and products comprising corn oil and corn meal obtained from corn)

Fats and Glyceridic oils, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (stearins, oxy-; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Fuel oil

(substitutes; corn oil processing and products comprising corn oil and corn meal obtained from corn)

TT

(swine; corn oil processing and products comprising corn oil and corn meal obtained from corn)

TΨ 7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological

RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(corn oil processing and products comprising corn oil and corn meal obtained from corn)

- 56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropyl alcohol, biological studies 73-22-3, L-Tryptophan, biological studies 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9, Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT, biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin 994-36-5, Sodium citrate 1107-26-2, β-Apo-8'-carotenal 6829-55-6, Tocotrienol 7235-40-7,  $\beta$ -Carotene 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological 9000-90-2, α-Amylase 9001-92-7, Protease Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0, 9005-25-8, Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate 39413-05-Isopropyl citrate RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
- obtained from corn) IT 1393-63-1, Annatto

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (ext.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

(corn oil processing and products comprising corn oil and corn meal

124-38-9, Carbon dioxide, biological studies IΤ

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (supercrit.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  $L_2$ 

### Full Text

- 1998:410640 CAPLUS
- 129:86023
- Entered STN: 04 Jul 1998
- Aerosol containing vitamin A or a derivative thereof ΤI
- Thoma, Karl; Rothenberger, Siegfried; Hein, Thomas IN
- Hermes Fabrik Pharmazeutischer Praeparate Franz Gradinger G.m.b.H. Co., PA
- SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

ΙT

```
DT
         Patent
    LA
         German
    IC
         ICM A61K009-12
         ICS A61K031-07
    CC
         63-6 (Pharmaceuticals)
    FAN.CNT 1
        PATENT NO.
                            KIND DATE
                                              APPLICATION NO.
        -----
                                                                     DATE
                            ----
                                              _____
        EP 848949
                            A1
                                  19980624
                                              EP 1997-122419
            R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                IE, SI, LT, LV, FI, RO
        DE 19652790
                            A1
                                  19980625
                                              DE 1996-19652790
   PRAI DE 1996-19652790
                                                                     19961218
                                  19961218
   CLASS
    PATENT NO.
                   CLASS PATENT FAMILY CLASSIFICATION CODES
                   ----
                          ___________
    EP 848949
                   ICM
                          A61K009-12
                   ICS
                          A61K031-07
       Vitamin A-contg. pharmaceutical aerosols for use on the respiratory tract
   AB
       mucosa are provided for treatment of disorders affecting the respiratory
       epithelium, e.g. neoplasms, metastases, squamous metaplasia, bronchitis,
       and newborn bronchopulmonary dysplasia. These compns. contain satd.
       hydrocarbons as solubilizers to improve the aerosolization of the active
       agent. At low concns., these hydrocarbons do not display the
       flammability, toxicity, and unpleasant flavor seen at higher concns.
       Thus, an aerosol prepn. contained retinol palmitate 1.10,
       DL-\alpha-tocopherol 0.11, tetrafluoroethane 76.71, and isobutane 22.08
       vitamin A solubilizer hydrocarbon aerosol; inhalant retinol solubilizer
  ST
  IT
       Antitumor agents
       Propellants (fuels)
       Solubilizers
          (aerosol contg. vitamin A or deriv. thereof)
      Carotenes, biological studies
      Retinoids
      RL: BAC (Biological activity or effector, except adverse); BSU (Biological
      study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
         (aerosol contg. vitamin A or deriv. thereof)
 TΤ
      Hydrocarbons, biological studies
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (aerosol contg. vitamin A or deriv. thereof)
 IT
         (bronchitis; aerosol contg. vitamin A or deriv. thereof)
 IT
      Newborn
         (bronchopulmonary dysplasia in; aerosol contg. vitamin A or deriv.
· IT
     Lung, disease
         (bronchopulmonary dysplasia, in newborn; aerosol contg. vitamin A or
        deriv. thereof)
 IT
     Bronchi
     Bronchi
        (carcinoma; aerosol contg. vitamin A or deriv. thereof)
IT
     Respiratory tract
        (ciliated epithelium, disorder; aerosol contg. vitamin A or deriv.
        thereof)
IT
     Epithelium
        (ciliated, respiratory tract, disorder; aerosol contg. vitamin A or
        deriv. thereof)
     Mucous membrane
```

```
Mucous membrane
           (disease; aerosol contg. vitamin A or deriv. thereof)
  IT
       Cell differentiation
          (disorder, of tracheobronchial tract; aerosol contg. vitamin A or
          deriv. thereof)
       Poisons, nonbiological source
          (gaseous, tracheobronchial epithelium damage from; aerosol contg.
          vitamin A or deriv. thereof)
  IT
       Drug delivery systems
          (inhalants; aerosol contg. vitamin A or deriv. thereof)
  IT
       Bronchi
       Trachea (anatomical)
       Trachea (anatomical)
          (mucosa, disease; aerosol contg. vitamin A or deriv. thereof)
       Respiratory tract
  TΤ
       Respiratory tract
          (mucosa; aerosol contg. vitamin A or deriv. thereof)
  IT
      Gland
          (mucous, disorder; aerosol contg. vitamin A or deriv. thereof)
      Mucous membrane
      Mucous membrane
          (respiratory tract; aerosol contg. vitamin A or deriv. thereof)
 IT
      Epithelium
         (squamous, disease, metaplasia; aerosol contg. vitamin A or deriv.
         thereof)
 TT
      Mucous membrane
      Mucous membrane
         (trachea, disease; aerosol contg. vitamin A or deriv. thereof)
 IT
      Dust.
         (tracheobronchial epithelium damage from; aerosol contg. vitamin A or
         deriv. thereof)
 IT
      68-26-8, Retinol 68-26-8D, Retinol, esters
                                                     79-81-2, Retinol palmitate
      302-79-4, Retinoic acid 302-79-4D, Retinoic acid, esters
                                                                  7235-40-7,
      RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
         (aerosol contg. vitamin A or deriv. thereof)
     74-98-6, Propane, biological studies 75-28-5, Isobutane
     n-Butane, biological studies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (solubilizer; aerosol contg. vitamin A or deriv. thereof)
RE.CNT
              THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
       3
(1) Boehringer Ingelheim Int; WO 9111496 A CAPLUS
(2) Glaxo Group Ltd; WO 9311743 A CAPLUS
(3) Gradinger F Hermes Pharma; EP 0352412 A CAPLUS
=> s grain or fescue or clover or wheat or barley or oats or rye or sorghum or flax or tritica
        131456 GRAINS
        352360 GRAIN
                 (GRAIN OR GRAINS)
         3505 FESCUE
           50 FESCUES
         3514 FESCUE
                 (FESCUE OR FESCUES)
        14319 CLOVER
          501 CLOVERS
        14442 CLOVER
                (CLOVER OR CLOVERS)
```

```
114091 WHEAT
     2769 WHEATS
   114186 WHEAT
             (WHEAT OR WHEATS)
    46763 BARLEY
      896 BARLEYS
    46815 BARLEY
            (BARLEY OR BARLEYS)
    13185 OATS
    15109 RYE
       62 RYES
    15120 RYE
            (RYE OR RYES)
    13119 SORGHUM
      343 SORGHUMS
    13147 SORGHUM
            (SORGHUM OR SORGHUMS)
     8663 FLAX
      17 FLAXES
    8668 FLAX
            (FLAX OR FLAXES)
    1923 TRITICALE
    126 TRITICALES
    1931 TRITICALE
            (TRITICALE OR TRITICALES)
   77622 RICE
     461 RICES
   77638 RICE
           (RICE OR RICES)
       4 TRITICALE RICE
           (TRITICALE (W) RICE)
 111199 CORN
    345 CORNS
 111319 CORN
          (CORN OR CORNS)
    442 SPELT
     70 SPELTS
    502 SPELT
          (SPELT OR SPELTS)
   5204 MILLET
    206 MILLETS
   5246 MILLET
          (MILLET OR MILLETS)
   2537 AMARANTH
    25 AMARANTHS
   2547 AMARANTH
          (AMARANTH OR AMARANTHS)
   3511 BUCKWHEAT
    12 BUCKWHEATS
  3513 BUCKWHEAT
          (BUCKWHEAT OR BUCKWHEATS)
   566 QUINOA
     1 QUINOAS
   567 QUINOA
         (QUINOA OR QUINOAS)
    10 KAMUT
  2335 TEFF
     9 TEFFS
  2339 TEFF
         (TEFF OR TEFFS)
609809 GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE OR
```

SORGHUM OR FLAX OR TRITICALE RICE OR CORN OR SPELT OR MILLET OR

L3

# AMARANTH OR BUCKWHEAT OR QUINOA OR KAMUT OR TEFF

```
=> 3 and (carotene or carotenoid or lycopene lutein or betatene)
 3 IS NOT A RECOGNIZED COMMAND
 The previous command name entered was not recognized by the system.
 For a list of commands available to you in the current file, enter
 "HELP COMMANDS" at an arrow prompt (=>).
 => s 13 and (carotene or carotenoid or lycopene lutein or betatene)
          27960 CAROTENE
          20157 CAROTENES
          38399 CAROTENE
                  (CAROTENE OR CAROTENES)
          17279 CAROTENOID
          22985 CAROTENOIDS
          27802 CAROTENOID
                  (CAROTENOID OR CAROTENOIDS)
           4100 LYCOPENE
             53 LYCOPENES
           4110 LYCOPENE
                  (LYCOPENE OR LYCOPENES)
           5027 LUTEIN
            36 LUTEINS
           5036 LUTEIN
                  (LUTEIN OR LUTEINS)
             84 LYCOPENE LUTEIN
                  (LYCOPENE (W) LUTEIN)
            13 BETATENE
          4094 L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE)
I.4
\Rightarrow s 14 and (vegetable oil or meadowfoam or peanut or cottonseed or rapeseed or rape seed or m
         24529 VEGETABLES
         85891 VEGETABLE
                 (VEGETABLE OR VEGETABLES)
        688257 OIL
        329781 OILS
        775486 OIL
                 (OIL OR OILS)
        18323 VEGETABLE OIL
                (VEGETABLE(W)OIL)
          162 MEADOWFOAM
        20918 PEANUT
         4944 PEANUTS
        22197 PEANUT
                (PEANUT OR PEANUTS)
        16294 COTTONSEED
          428 COTTONSEEDS
        16373 COTTONSEED
                (COTTONSEED OR COTTONSEEDS)
         8261 RAPESEED
         183 RAPESEEDS
         8302 RAPESEED
                (RAPESEED OR RAPESEEDS)
        17950 RAPE
           67 RAPES
        17964 RAPE
                (RAPE OR RAPES)
      123220 SEED
       86209 SEEDS
      165907 SEED
```

(SEED OR SEEDS)

```
2185 RAPE SEED
                    (RAPE (W) SEED)
              651 MACADAMIA
                3 MACADAMIAS
              651 MACADAMIA
                    (MACADAMIA OR MACADAMIAS)
             2573 AVOCADO
              343 AVOCADOS
             2629 AVOCADO
                    (AVOCADO OR AVOCADOS)
           14682 PALM
            1143 PALMS
           15071 PALM
                    (PALM OR PALMS)
           30243 CASTOR
              15 CASTORS
           30255 CASTOR
                    (CASTOR OR CASTORS)
  L5
             316 L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED OR
                 RAPESEED OR RAPE SEED OR MACADAMIA OR AVOCADO OR PALM OR CASTOR)
  => s 15 and (thermal or heat?)
          954571 THERMAL
              66 THERMALS
          954600 THERMAL
                   (THERMAL OR THERMALS)
         2156456 HEAT?
 L6
              36 L5 AND (THERMAL OR HEAT?)
 => d 16 1-36 ti
      ANSWER 1 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
 L6
      Production method for particles containing lipophilic compounds, and
      apparatus therefor
 L_6
      ANSWER 2 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
      Edible fat emulsions as food spreads.
     ANSWER 3 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
      \beta,\beta\mbox{-Carotene} and 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline
      mixtures as diesel fuel stabilizers and cetane improvers
     ANSWER 4 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
L6
     A strong constitutive promoter from the parsley ubiquitin gene and its use
     in expression of foreign genes in plants
     ANSWER 5 OF 36 CAPLUS COPYRIGHT 2004.ACS on STN
L6
     Cosmetic compositions comprising silicone gels
     ANSWER 6 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
     Cosmetic compositions comprising silicone gels comprising entrapped,
     occluded or encapsulated pigments
     ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
L6
     Optothermal window method for on-line monitoring of decay kinetics of
     trans-\beta-carotene in thermally treated vegetable oils
     ANSWER 8 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
L6
    Purification and characterization of an autoclavable superoxide dismutase
     (SOD) isozyme from Potentilla atrosanguinea, and use of the SOD in
     cosmetic, food and pharmaceutical compositions
```

- ANSWER 9 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
- Fast quality screening of vegetable oils by HPLC-thermal lens spectrometric detection
- ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Process for producing carotenoid emulsion TI
- ANSWER 11 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Ultrasensitive assays of trans- and  $\text{cis-}\beta\text{-}\text{carotenes}$  in vegetableTIoils by high-performance liquid chromatography-thermal lens detection
- ANSWER 12 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6 TI
- Unsaponifiables-enriched vegetable oil as food ingredient
- ANSWER 13 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6TI
- Encapsulation of sensitive liquid components into a matrix to obtain discrete shelf-stable particles
- ANSWER 14 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Nutrient intensified oil and its preparing process ΤI
- ANSWER 15 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Diurnal changes of photooxidation response in leaves of C3 and C4 plants ΤI
- ANSWER 16 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Effect of traditional processing practices on the content of total carotenoid,  $\beta\text{-carotene}$  ,  $\alpha\text{-carotene}$  and vitamin A activity of selected Tanzanian vegetables
- ANSWER 17 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
- Detection of process components in food process streams by fluorescence
- ANSWER 18 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6 TI
- Compositions containing water-soluble hemicellulose and natural resins
- ANSWER 19 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6 ΤI
- Carotene removal from corn meal
- ANSWER 20 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Process of obtaining the sea buckthorn oil "aska-tesh"
- ANSWER 21 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- ΤI Cream cheese type food
- ANSWER 22 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6 TΙ
- Rapeseed meal in the diet of common carp reared in heated waters. V. Carotenoids in diets and fish tissues
- ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- TΙ Low fat comestible spread
- ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- ΤI Stable clear liquid release agent
- ANSWER 25 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- The preparation of water-soluble powdered  $\beta\text{-carotene}$  and its preservation stability
- ANSWER 26 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6ΤI
- Fixing lipophilic substances on starch, starch derivatives, or materials

- ANSWER 27 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Suitability of some Egyptian clays for bleaching cottonseed oil. III. TΤ Regeneration of spent clays
- ANSWER 28 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  $L_6$
- TΙ Margarine oil compositions
- ANSWER 29 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- ΤI Preparation of  $\beta$ -carotene
- ANSWER 30 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- ТT Stabilized carotene composition
- ANSWER 31 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- TI Synthesis of carotene homologs
- ANSWER 32 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- $\delta\textsc{-Tocopherol}$  . I. Isolation from soybean oil and properties TI
- ANSWER 33 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN 1.6
- Chemical estimation of vitamin E in vegetable oils ТT
- ANSWER 34 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Stabilizing cottonseed oil or other glyceridic oils against oxidative TI deterioration
- ANSWER 35 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- ΤI Improving the quality of milk
- ANSWER 36 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Stabilizing fats and oils against rancidity TI

#### => d 16 7 10 23 24 all

- ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN L6
- Full Text
- ΑN 2003:540724 CAPLUS
- 139:349781 DN
- ED Entered STN: 15 Jul 2003
- Optothermal window method for on-line monitoring of decay kinetics of TI trans- $\beta$ -carotene in thermally treated vegetable oils
- Ganguli, Otto; Bicanic, Dane; Bonifacic, Marija; Nicoli, Maria Cristina; AU Chirtoc, Mihai
- Agrotechnology and Food Sciences, Division of Biophysics, Laser Laboratory CS for Photoacoustic and Photothermal Research, Wageningen University and Research Centre, Wageningen, 6703 HA, Neth.
- European Food Research and Technology (2003), 217(1), 74-79 SO CODEN: EFRTFO; ISSN: 1438-2377
- PΒ Springer-Verlag
- DT. Journal
- LA English
- CC 17-1 (Food and Feed Chemistry)
- The optothermal window detection method at 488 nm was used to monitor AΒ online the concn. of trans- $\beta$ -carotene that was added to several vegetable oils after treating them at 200° in the presence of air for varying amts. of time. Results obtained for extra virgin oil show a direct proportionality between the rate const. describing the disappearance of trans- $\beta\mbox{-carotene}$  and the duration of thermal treatment. The rate const. for the decay of trans- $\beta$ -carotene in oils treated under identical conditions was also dependent on the type of oil. Trends and individual data are discussed in the light of a possible

```
application of the method for the detn. of the oxidative stability of
        vegetable oils.
        vegetable oil carotene optothermal window photoacoustic spectroscopy
   ST
   ΙT
        Olive oil
        RL: AMX (Analytical matrix); ANST (Analytical study)
           (extra virgin; optothermal window method for online monitoring of decay
           kinetics of trans-\beta-carotene in thermally treated
           vegetable oils)
   IT
        Photoacoustic spectroscopy
        Reaction kinetics
           (optothermal window method for online monitoring of decay kinetics of
           trans-\beta-carotene in thermally treated vegetable
           oils)
  IT
        Corn oil
       Safflower oil
       Sunflower oil
       RL: AMX (Analytical matrix); ANST (Analytical study)
           (optothermal window method for online monitoring of decay kinetics of
           trans-\beta-carotene in thermally treated vegetable
          oils)
       Fats and Glyceridic oils, analysis
       RL: AMX (Analytical matrix); ANST (Analytical study)
          (vegetable; optothermal window method for online monitoring of decay
          kinetics of trans-\beta-carotene in thermally treated
          vegetable oils)
  ΙT
       7235-40-7, \beta, \beta-Carotene
       RL: ANT (Analyte); ANST (Analytical study)
          (optothermal window method for online monitoring of decay kinetics of
          trans-\beta\text{-carotene} in thermally treated \textbf{vegetable}
          oils)
 RE.CNT 14
                THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
 (1) Bicanic, D; Appl Spectrosc 1995, V49, P1485 CAPLUS
 (2) Chen, B; J Agric Food Chem 1994, V42, P2391 CAPLUS
 (3) Doka, O; Anal Chem 2002, V74, P2157 CAPLUS
 (4) Halliwell, B; Crit Rev Food Sci 1995, V35, P7 CAPLUS
 (5) Helander, P; Meas Sci Technol 1993, V4, P178
 (6) Henry, L; J Am Oil Chem Soc 1998, V75, P823 CAPLUS
 (7) Labuza, T; J Am Oil Chem Soc 1969, V46, P409 CAPLUS
 (8) Loliger, J; J Sci Food Agric 1990, V52, P119
 (9) Matthaus, B; J Am Oil Chem Soc 1996, V73, P1039 CAPLUS
 (10) McQueen, D; Anal Chem 1995, V14, P482 CAPLUS
 (11) Minguez-Mosquera, M; J Sci Food Agric 1995, V67, P153
 (12) Pagano, T; Rev Ing Quim 1999, V15, P11
 (13) Pellegrini, N; J Agric Food Chem 2001, V49, P2532 CAPLUS
 (14) Steenson, D; J Am Oil Chem Soc 2000, V77, P153
     ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
L6
Full Text
     2002:556118 CAPLUS
AN
DN
     137:108618
     Entered STN: 26 Jul 2002
ED
     Process for producing carotenoid emulsion
TI
     Mori, Toshiki; Mimura, Satoshi; Nakatani, Tomonari
IN
PA
     Kuraray Co., Ltd., Japan
     U.S. Pat. Appl. Publ., 10 pp.
SO
     CODEN: USXXCO
DT
     Patent
LA
     English
IC
     ICM C09K003-00
NCL 516073000
     17-4 (Food and Feed Chemistry)
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Section cross-reference(s): 63
FAN.CNT 1
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002099102 US 6664300 EP 1227082	A1 B2	20020725 20031216	US 2002-52456	20020123
EP 1227082	A1 B1	20020731 20040616	EP 2002-166	20020108
R: AT, BE, I IE, SI, I AT 269301	CH, DE, DK LT, LV, FI, E	, ES, FR, GB, , RO, MK, CY, 20040715		SE, MC, PT,
CN 1367167 JP 2002302479	A	20020904	AT 2002-166 CN 2002-100969	20020108 20020110
JP 2002316924 PRAI JP 2001-15267	A2	00000	JP 2002-13194 JP 2002-13195	20020122 20020122
JP 2001-15274 CLASS	A	20010124		
PATENT NO. CLASS	ם ייייוגיבוייי D7	BATTER		

CLASS PATENT FAMILY CLASSIFICATION CODES \_\_\_\_\_\_

US 2002099102 ICM C09K003-00 NCL. 516073000

US 2002099102 ECLA C07C175/00B

Disclosed is a process for producing a carotenoid emulsion which comprises heating a suspension of the carotenoid in a high boiling org. liq., by passing the suspension through a conduit of 0.1 to 50  $\ensuremath{\text{mm}}$ inside diam. heated to temp. at 120-700° for a residence time of 0.05 to 5 s or by mixing the suspension with a high boiling org. liq. heated to the range of 120 to 500° for a time of 0.05 to 10 s, to dissolve the carotenoid, and then immediately adding the resulting soln. into an aq. soln. of an emulsifier to emulsify the soln. By this prodn. process, an emulsion contg. a carotenoid as an effective ingredient can be produced with the carotenoid maintaining a high total trans-form proportion, with good productivity, conveniently, and industrially advantageously. ST

carotenoid emulsion prodn process

Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(C16-18, esters with sucrose, emulsifiers; process for producing carotenoid emulsion)

Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(C8-14, esters with sucrose, emulsifiers; process for producing carotenoid emulsion)

Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(castor-oil, esters with sorbitan, emulsifiers; process for producing carotenoid emulsion)

IΤ Alkali metal compounds

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(emulsifiers; process for producing carotenoid emulsion)

Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

```
(esters, emulsifiers, of ascorbic acid and sorbitan; process for
          producing carotenoid emulsion)
  IT
       Corn oil
       Diglycerides
       Edible oils
       Glycerides, biological studies
       Monoglycerides
       Paraffin oils
       Terpenes, biological studies
       RL: FFD (Food or feed use); PEP (Physical, engineering or chemical
       process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological
       study); PROC (Process); USES (Uses)
          (high boiling org. liq.; process for producing carotenoid
          emulsion)
       Antioxidants
       Emulsifying agents
       Emulsions
          (process for producing carotenoid emulsion)
      Carotenes, biological studies
      RL: FFD (Food or feed use); PEP (Physical, engineering or chemical
      process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological
       study); PROC (Process); USES (Uses)
          (process for producing carotenoid emulsion)
 IT
      Fatty acids, biological studies
      RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical,
      engineering or chemical process); PYP (Physical process); THU (Therapeutic
      use); BIOL (Biological study); PROC (Process); USES (Uses)
         (tall-oil, esters with sorbitan, emulsifiers; process for producing
         carotenoid emulsion)
      137-66-6, Ascorbic acid palmitate 1310-73-2, Sodium hydroxide,
      biological studies
      RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical,
      engineering or chemical process); PYP (Physical process); THU (Therapeutic
      use); BIOL (Biological study); PROC (Process); USES (Uses)
         (emulsifiers; process for producing carotenoid emulsion)
      25496-72-4, Monoolein
      RL: FFD (Food or feed use); PEP (Physical, engineering or chemical
     process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological
      study); PROC (Process); USES (Uses)
         (high boiling org. liq.; process for producing carotenoid
         emulsion)
     472-61-7; Astaxanthin 472-70-8, Cryptoxanthin 514-78-3, Canthaxanthin
     3604-90-8, Citranaxanthin 7235-40-7, \beta-Carotene
     12676-20-9, Apocarotenal
     RL: FFD (Food or feed use); PEP (Physical, engineering or chemical
     process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological
     study); PROC (Process); USES (Uses)
        (process for producing carotenoid emulsion)
L6
     ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
Full Text
AN
     1982:508798 CAPLUS
DN
    97:108798
    Entered STN: 12 May 1984
TI
    Low fat comestible spread
    Miller, Donald E.; Werstak, Charles E.
    SCM Corp. , USA
    Eur. Pat. Appl., 21 pp.
SO
     CODEN: EPXXDW
DТ
    Patent
LA
    English
    A23D003-00; A23L001-24; A23C020-00
```

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CC 17-9 (Food and Feed Chemistry)
   FAN.CNT 1
       PATENT NO.
                          KIND
                                 DATE
                                            APPLICATION NO.
                                                                   DATE
                           ----
                                 -----
                                                                    _____
       EP 49705
                           A1 19820421 EP 1980-106140
                                                                   19801009
          R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
  PRAI EP 1980-106140
                                 19801009
   PATENT NO.
                 CLASS PATENT FAMILY CLASSIFICATION CODES
   IC A23D003-00IC A23L001-24IC A23C020-00
       An oil-in-water emulsion suitable for use in the prodn. of low-fat analogs
       of margarine, mayonnaise, or cheese is prepd. from an emulsifier, a
       thickening agent, a fat with a Wiley \mathfrak{m.p.} of 24-41° and a solid fat
       index at 35.5^{\circ} of \leq 20 and at 37.5^{\circ} essentially zero,
       and optionally flavoring and coloring agents. Thus, water (68.31%) was
       mixed with Methocel K-100M (hydroxypropylmethyl cellulose) [9004-65-3]
       (0.5%), Avicel RC 581 (cellulose prepn.) [51395-75-6] (0.5%), and
       \beta-carotene (0.09%) with heat; Dur-em 114 emulsifier
       (monoglycerides) (4.0%), dewaxed corn oil (11.25%), hydrogenated
      cottonseed-soybean oil (13.75%), and artificial butter flavor (0.1%)
      were added; the material was homogenized at 1000-2000 psig; salt was
      added; and the emulsion was cooled, yielding a margarine-like product.
      emulsion food fat; margarine fat low emulsion; cheese substitute emulsion;
      mayonnaise substitute emulsion
 IT
      Soybean oil
      RL: BIOL (Biological study)
         (cottonseed oil mixt. with, hydrogenated, food fat-low
         emulsion contq.)
      Butter substitutes
      Cheese substitutes
      Margarine
         (fat-low, emulsion for)
      Corn oil
      RL: BIOL (Biological study)
         (food fat-low emulsion contg.)
 IT
      Cottonseed oil
      RL: BIOL (Biological study)
         (soybean oil mixt. with, hydrogenated, food fat-low emulsion contg.)
 TΤ
         (substitutes, fat-low, emulsion for)
 IT
     Food
        (emulsions, fat-low, manuf. of)
 IT
     Glycerides, biological studies
     RL: BIOL (Biological study)
       (mono-, in food fat-low emulsion manuf.)
 IT
     9004-32-4 9004-65-3 51395-75-6
     RL: BIOL (Biological study)
       (in food fat-low emulsion manuf.)
     9004-34-6, biological studies
IT
     RL: BIOL (Biological study)
        (microcryst., in food fat-low emulsion manuf.)
     ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN
L6
Full Text
AN
    1980:406377 CAPLUS
DN
    93:6377
ED
   Entered STN: 12 May 1984
TI Stable clear liquid release agent
IN Hanson, Harold W., Sr.
PA Par-Way Mfg. Co., USA
SO U.S., 4 pp. Cont.-in-part of U.S. Ser. No. 532,850. abandoned.
```

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CODEN: USXXAM
    DT
        Patent
    LA
        English
    IC
        A23D005-00
    NCL 426250000
    CC
       17-2 (Foods)
   FAN.CNT 2
        PATENT NO.
                          KIND DATE
                                             APPLICATION NO.
        -----
                                                                    DATE
                           ----
                                              -----
        US 4192898
                            Α
                                  19800311
                                              US 1978-916116
        US 4096258
                                                                  19780616
                           A 19780620
                                             US 1977-772929
   PRAI US 1974-532850
                                                                  19770228
                                 19741216
        US 1975-621309
                                 19751010
        US 1977-772929
                                 19770228
   CLASS
    PATENT NO.
                   CLASS PATENT FAMILY CLASSIFICATION CODES
    -----
                         ______
   US 4192898 IC
                          A23D005-00
                  NCL
                          426250000
       A stable clear pan release agent consists of 0.25-2% by wt. Polysorbate 80
       [9005-65-6] in a mixt. of 2 or more oils, the major oil being liq. at room
       temp., and the minor one being solid at room temp. The oils are agitated
       at ~74°, rapidly chilled and worked to at least 25°;
       worked at that temp., and combined with CO2 propellant to yield an aerosol
       product. Thus, about half of 2675 lb soybean oil and 1784 lb coconut oil
       were heated and mixed to 70°, the immersion heaters were cut
       off, 240 lb double-bleached lecithin was mixed in for 10 min, the balance
       of the soybean and coconut oils was added followed by 36.9 lb Polysorbate
       80, 2.4 lb BEX butter deriv., and 3.8 or \beta\text{-carotene}. The batch was
      mixed for 3 min, cooled to \sim\!60^{\circ}, and passed through a 2-stage
      homogenizer (1000 and 3500 psi, resp.), and cooled to \sim 38^{\circ}.
      The blend was agitated rapidly in a Votator while chilling to
      ~21°, and then worked with a high-speed paddle mixer. The
      product was clear and brilliant.
      pan release agent; cooking utensil release agent
 ST
 TΤ
      Coconut oil
        Corn oil
        Cottonseed oil
      Lecithins, biological studies
        Peanut oil
      Soybean oil
      RL: BIOL (Biological study)
        (of cooking utensil release agents)
     Oils
     RL: BIOL (Biological study)
        (palm kernel, of cooking utensil release agents)
ΙT
     Oils
     RL: BIOL (Biological study)
        (palm, of cooking utensil release agents)
     Cooking utensils
        (release agents for)
     637-12-7 9005-65-6
     RL: BIOL (Biological study)
        (of cooking utensil release agents)
    124-38-9, uses and miscellaneous
    RL: USES (Uses)
       (propellant, for aerosol cooking utensil release agents)
=> d his
    (FILE 'HOME' ENTERED AT 17:00:22 ON 29 OCT 2004)
```

IT

IΤ

```
FILE 'CAPLUS' ENTERED AT 17:00:37 ON 29 OCT 2004
  L1
               45 S FUEL AND (VITAMIN E OR TOCOPHEROL)
  L2
                2 S L1 AND CAROTENE
           609809 S GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE O
  L3
            4094 S L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE
  L4
             316 S L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED O
  L5
  L6
              36 S L5 AND (THERMAL OR HEAT?)
  => s 15 and (vitamin e or tocopherol)
         176528 VITAMIN
          49415 VITAMINS
         195026 VITAMIN
                  (VITAMIN OR VITAMINS)
        1802584 E
          28667 VITAMIN E
                  (VITAMIN(W)E)
          27205 TOCOPHEROL
           8044 TOCOPHEROLS
          29454 TOCOPHEROL
                  (TOCOPHEROL OR TOCOPHEROLS)
 L7
            107 L5 AND (VITAMIN E OR TOCOPHEROL)
 => s 17 and diesel
          40979 DIESEL
            423 DIESELS
          41029 DIESEL
                  (DIESEL OR DIESELS)
 LR
             1 L7 AND DIESEL
 => d 18 all
     ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
 Full Text
     2003:334695 CAPLUS
 DN 138:336957
     Entered STN: 02 May 2003
     Corn oil processing and products comprising corn oil and corn meal
     obtained from corn
     Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.;
 IN
     Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.;
     Patist, Alexander
PΑ
     Renessen, LLC, USA
     U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836.
     CODEN: USXXCO
DT
     Patent
LΑ
     English
     ICM C11C001-00
     ICS A21D002-00
NCL 554010000; 554020000; 426622000
     17-9 (Food and Feed Chemistry)
     Section cross-reference(s): 18, 45, 51, 62
FAN.CNT 10
     PATENT NO.
                        KIND DATE
                                          APPLICATION NO.
                                                                 DATE
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                                           -----
PΤ
    US 2003083512
                        A1
                               20030501
                                          US 2002-47725
                                                                 20020115
    US 6610867
                        B2 20030826
    US 2002193617
                        A1 20021219 US 2001-927836
                                                                 20010810
    US 6648930
                        B2
                            20031118
    US 2003224496
                        A1
                       A2 2000810
A2 2001
                            20031204 US 2003-368521
                                                                 20030218
PRAI US 2000-637843
    US 2001-927836
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CLA	US	1999-249 2002-477		A2 A2	19990211 20020115		
	TENT	NO.	CLASS	PATENT	FAMILY CLASSIFICATION CODES		
		083512	ICM ICS NCL ECLA	A23D009 A23K001 C08B030			
US	2002	193617		A23D009, A23D009, A23K110, A23K001, A23K001,	/14; A23K001/16G; A23K001/16L; A23K001/18 /00; C11B001/10; C11B003/00B; C12P007/06; /007; A23J001/14C2; A23K001/00B2; A23K001/04; /; A23K001/10C; A23K001/14; A23K001/16G; /16L; A23K001/18; A23K001/18K; A23K001/18L2; /18N; A23K001/18S; A23L001/10M; A23L001/30C; /00; C08B030/10; C08L099/00; C11B001/04;		
US	20032		ECLA	A23D009/ A23K001/ A23K001/ A23K001/ A23L001/	700; A23D009/007; A23J001/14C2; A23K001/00B2; 704; A23K001/10; A23K001/10C; A23K001/14; A23K; 16L; A23K001/18; A23K001/18K; A23K001/18L2; 18N; A23K001/18S; A23L001/10M; A23L001/105; 30C; B02B001/00; C08B030/10; C08L099/00; 04; C11B001/06; C11B001/10; C11B003/00B; C12P		
AB	meal corn and is u lubr prod	The case of the ca	he corn morn grand aving a corn or making biodiese the corn or making biodiese the extd.	oil is  in proce  total o  oil from  g nutrit  el, fuel  corn me	ined from corn are included in useful extd. from the corn to form the corn ss generally includes the steps of cracking il content of from about 3% to 30% by wt. the cracked corn grain. The corn oil ionally enhanced edible oil or cooking oil, cosmetics and oil-based or oil-contg. chem. eal is useful for making enhanced animal feed if food products, cosmetics, and fermn. broth		
ST IT	corn meal oil manuf feed food fuel cosmetic Fats and Glyceridic oils, biological studies RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (animal; corn oil processing and products comprising corn oil and corn meal obtained from corn)						
IT	Food						
IT	<pre>(bars; corn oil processing and products comprising   corn oil and corn meal obtained from corn) Diesel fuel substitutes   (biodiesel; corn oil processing and products comprising   corn oil and corn meal obtained from corn)</pre>						
IT	Oryza (b	ı sativa ran; <b>cor</b>	n oil p	rocessin	g and products comprising tained from corn)		
ΙΤ	Baker Triti (b	y produc cum aest yproduct	ts ivum s; corn	oil pro	cessing and products comprising tained from corn)		
ĬΤ	Solve (c	nt extra ontinuou:	ction s; <b>corn</b>	oil prod	cessing and products comprising		
IT 1	corn oil and corn meal obtained from corn) Food viscosity (controls for; corn oil processing and products comprising						
	Glute	ns	a corn	meal obt	Cained from corn)  BIOL (Biological study); USES (Uses)		

```
(corn meal; corn oil processing and products
          comprising corn oil and corn meal obtained from
           corn)
  IT
       Acidity
       Air
       Antioxidants
       Biodegradable materials
       Bleaching
       Bread
       Breakfast cereal
       Canola
         Cottonseed
       Crosslinking agents
       Deodorization
       Dietary fiber
       Feed additives
       Feeding experiment
       Food additives
      Food processing
      Gallus domesticus
      Glycine max
      Helianthus annuus
      Herb
      Hordeum vulgare
      Micelles
      Nutrients
      Pigments, biological
        Rapeseed
        Rapeseed
      Solanum tuberosum
        Sorghum bicolor
      Spices
      Thickening agents
      Vinegar
      Zea mays
         (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
     Aldehydes, biological studies
     Anhydrides
     Epoxides
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        ({\tt corn}\ {\tt oil}\ {\tt processing}\ {\tt and}\ {\tt products}\ {\tt comprising}\ {\tt corn}
        oil and corn meal obtained from corn)
IT
     Amino acids, biological studies
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn
        oil and corn meal obtained from corn)
IT
     Canola oil
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn
        oil and corn meal obtained from corn)
    Carotenes, biological studies
    RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (corn oil processing and products comprising corn
       oil and corn meal obtained from corn)
    Enzymes, biological studies
    RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
       (corn oil processing and products comprising corn
       oil and corn meal obtained from corn)
    Fats and Glyceridic oils, biological studies
    RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
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IT

IT

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(corn oil processing and products comprising corn
           oil and corn meal obtained from corn)
   IT
        Lipids, biological studies
        RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
           (corn oil processing and products comprising corn
           oil and corn meal obtained from corn)
        Mineral elements, biological studies
        RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
           (corn oil processing and products comprising corn
           oil and corn meal obtained from corn)
        Olive oil
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
           (corn oil processing and products comprising corn
           oil and corn meal obtained from corn)
       Palm oil
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
           (corn oil processing and products comprising corn
          oil and corn meal obtained from corn)
       Proteins
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn
          oil and corn meal obtained from corn)
  TΤ
       Safflower oil
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn
          oil and corn meal obtained from corn)
  IT
       Soybean oil
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn
          oil and corn meal obtained from corn)
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
 IT
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
 IT
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
      Vitamins
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
IT
     Corn oil
     RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
         (corn oil processing and products comprising corn
        oil and corn meal obtained from corn)
IT
     Flours and Meals
        (corn; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
IT
     Bos taurus
        (dairy cattle; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
     Vitamins
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (fat-sol.; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
IT
    Flours and Meals
```

```
(feather meal; corn oil processing and products comprising
           corn oil and corn meal obtained from corn)
   TΤ
        Aquaculture
        Bos taurus
        Equus caballus
        Poultry
        Sus scrofa domestica
           (feed for; corn oil processing and products comprising
           corn oil and corn meal obtained from corn)
  IT
       Catfish
       Tilapia
           (feeding; corn oil processing and products comprising
           corn oil and corn meal obtained from corn)
  IT
       Zea mays
          (flour and meal; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
       Binders
          (for food; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
  TΤ
       Oryza sativa
          (hulls; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
  IT
       Beverages
          (low calorie; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
  IT
       Feather
          (meal; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
 IT
      Bone meal
      Meat
          (meat-and-bone meal; corn oil processing and products
         comprising corn oil and corn meal obtained from
 IT
      Triticum aestivum
         (middlings; corn oil processing and products comprising
         corn oil and corn meal obtained from corn)
 IT
      Cooking
         (oils for; corn oil processing and products comprising
         corn oil and corn meal obtained from corn)
 IT
      Seed
         (oilseed, meal; corn oil processing and products comprising
         corn oil and corn meal obtained from corn)
 IT
      Flours and Meals
         (oilseed; corn oil processing and products comprising
         corn oil and corn meal obtained from corn)
      Fats and Glyceridic oils, biological studies
IT
      Fats and Glyceridic oils, biological studies
     RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL
      (Biological study); USES (Uses)
         (partially hydrogenated; corn oil processing and products
        comprising corn oil and corn meal obtained from
        corn)
IT
     Feed
        (pet; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
IT
        (porridge; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
IT
        (rice; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
TT
     Food
```

```
(snack; corn oil processing and products comprising
           corn oil and corn meal obtained from corn)
  IT
       Beverages
           (sports; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
       Fats and Glyceridic oils, biological studies
  IT
       RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
          (stearins, oxy-; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
  IT
       Fuel oil
          (substitutes; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
  TT
       Feed
          (swine; corn oil processing and products comprising
          corn oil and corn meal obtained from corn)
       7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological
  IT
       RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL
       (Biological study); USES (Uses)
          (corn oil processing and products comprising corn
          oil and corn meal obtained from corn)
      56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological
  IT
      studies
               64-17-5, Ethanol, biological studies 67-63-0, Isopropyl
      alcohol, biological studies 73-22-3, L-Tryptophan, biological studies
      77-92-9, Citric acid, biological studies 77-92-9D, Citric acid,
      monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9,
      Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT,
      biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin
      994-36-5, Sodium citrate 1107-26-2, \beta-Apo-8'-carotenal
                                                                 6829-55-6.
      Tocotrienol
                   7235-40-7, \beta-Carotene 7647-14-5, Sodium
      chloride, biological studies 7664-38-2, Phosphoric acid, biological
      studies 9000-90-2, \alpha-Amylase 9001-92-7, Protease 9005-25-8,
      Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0,
      Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate
      39413-05-3, Isopropyl citrate
      RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (corn oil processing and products comprising corn
         oil and corn meal obtained from corn)
 TΤ
      1393-63-1, Annatto
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
         (ext.; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
     124-38-9, Carbon dioxide, biological studies
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (supercrit.; corn oil processing and products comprising
        corn oil and corn meal obtained from corn)
=> s triticale
          1923 TRITICALE
           126 TRITICALES
          1931 TRITICALE
L9
                 (TRITICALE OR TRITICALES)
=> s 19 and corn
        111199 CORN
           345 CORNS
        111319 CORN
                 (CORN OR CORNS)
L10
          250 L9 AND CORN
```

=> s 110 and fuel.

```
340874 FUEL
154939 FUELS
389767 FUEL
```

(FUEL OR FUELS)

L11

2 L10 AND FUEL

=> d l11 ti

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN Quality of solid biofuels - database and field trials

=> d l11 2 ti

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Protein byproduct recovery in fuel ethanol processing of agricultural materials

=> d l11 1 all

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:713328 CAPLUS

DN 132:24771

ED Entered STN: 09 Nov 1999

Quality of solid biofuels - database and field trials TI

Hartmann, H.; Maier, L.; Bohm, T. AU

Research Center of Agricultural Engineering, Munich University of Technology, Freising-Weihenstephan, D-85354, Germany

Biomass: A Growth Opportunity in Green Energy and Value-Added Products, Proceedings of the Biomass Conference of the Americas, 4th, Oakland, Calif., Aug. 29-Sept. 2, 1999 (1999), Volume 1, 273-279. Editor(s): Overend, Ralph P.; Chornet, Esteban. Publisher: Elsevier Science, Oxford,

CODEN: 68IQAG

DTConference

LA English

52-1 (Electrochemical, Radiational, and Thermal Energy Technology) CC Section cross-reference(s): 11, 40, 60

Quality aspects of solid biofuels were investigated in a new database. AB Most parameters varied greatly, particularly when annually harvested biomass was considered. For planning purposes the frequency distributions should be used rather than mean values. The quality of some crops may be changed by modified agricultural practices. Rainfall shortly after cutting can deplete chlorine and potassium in grass by 60 to 80%. st

solid biofuel quality database field trial; fuel gas manufg solid biofuel

ITFuels

> (biofuels, solid; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

ΙT Beech (Fagus)

Miscanthus

Spruce (Picea)

Wheat straw

(chlorine content of solid biofuel, from database)

Straw

Straw

(corn; chlorine content of solid biofuel, from database)

IT Bagasse

Bark

Compost

```
Databases
        Grass (Poaceae)
        Hay
        Leaf
        Straw
           (field trials of solid biofuel quality and database of identity, age,
          origin, fuel characteristics, element and compd. content,
          testing methodol., related literature)
       Fibers
       RL: NUU (Other use, unclassified); USES (Uses)
           (field trials of solid biofuel quality and database of identity, age,
          origin, fuel characteristics, element and compd. content,
          testing methodol., related literature)
  IT
       Mineral elements, occurrence
       RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
          (frequency distribution, selected quality parameters, similar cereal
          straw types, from database)
  TΨ
       Wood
          (natural, processed; field trials of solid biofuel quality and database
          of identity, age, origin, fuel characteristics, element and
          compd. content, testing methodol., related literature)
  IT
       Leaf
          (needle; field trials of solid biofuel quality and database of
         identity, age, origin, fuel characteristics, element and
         compd. content, testing methodol., related literature)
 IT
      Calorific value
          (net; frequency distribution, selected quality parameters, similar
          cereal straw types, from database)
 IT
      Flours and Meals
         (oilseed cakes; field trials of solid biofuel quality and database of
         identity, age, origin, fuel characteristics, element and
         compd. content, testing methodol., related literature)
 TΨ
      Seed
      Seed
         (oilseed, meal; field trials of solid biofuel quality and database of
         identity, age, origin, fuel characteristics, element and
         compd. content, testing methodol., related literature)
      Flours and Meals
         (oilseed; field trials of solid biofuel quality and database of
         identity, age, origin, fuel characteristics, element and
         compd. content, testing methodol., related literature)
 IT
      Fruit
         (pips; field trials of solid biofuel quality and database of identity,
        age, origin, fuel characteristics, element and compd.
        content, testing methodol., related literature)
TТ
     Fermentation
         (products, pomace; field trials of solid biofuel quality and database
        of identity, age, origin, fuel characteristics, element and
        compd. content, testing methodol., related literature)
ΙT
     Straw
     Straw
        (rape; chlorine content of solid biofuel, from database)
IT
     Straw
     Straw
        (rye; chlorine content of solid biofuel, from database)
IT
     Nut (seed)
        (shells; field trials of solid biofuel quality and database of
        identity, age, origin, fuel characteristics, element and
        compd. content, testing methodol., related literature)
IΤ
     Poplar (Populus)
     Willow (Salix)
        (short rotation forestry; chlorine content of solid biofuel, from
```

```
IT
       Corn
         Corn
       Rape (plant)
       Rape (plant)
       Rye
       Rye
       Sunflower
       Sunflower
         Triticale
         Triticale
          (straw; chlorine content of solid biofuel, from database)
      Straw
      Straw
          (sunflower; chlorine content of solid biofuel, from database)
 IT
      Straw
      Straw
         (triticale; chlorine content of solid biofuel, from database)
 IT
      Rye
        Triticale
      Wheat
         (whole crop; chlorine content of solid biofuel, from database)
      7782-50-5, Chlorine, occurrence
      RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
         (chlorine content, solid biofuels)
 IT
      7704-34-9, Sulfur, occurrence
      RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
         (effect of harvesting date and field retention time, selected quality
         parameters in grass, from database)
 IT
      7440-09-7, Potassium, occurrence
                                         7727-37-9, Nitrogen, occurrence
     RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
         (frequency distribution, selected quality parameters, similar cereal
         straw types, from database)
=> log y
COST IN U.S. DOLLARS
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
FULL ESTIMATED COST
                                                      138.86
                                                                 139.07
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
CA SUBSCRIBER PRICE
                                                       -5.60
                                                                  -5.60
STN INTERNATIONAL LOGOFF AT 17:18:30 ON 29 OCT 2004
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database)